

User Guide



NAS-20

※ User Information

B Class Equipment (Equipment for home use): This apparatus is for home use and has a radio wave acceptability registration, so it can be used in all areas.

※ Warning

- 1) We are not responsible for your lost data.
- 2) Do not drop the device. It may cause critical damage to the hard disk.
- 3) Keep away from magnetic material. Data may be corrupted.
- 4) Please remove the device safely, or you may lose your data.

Sarotech CO., Ltd.
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Safety Warnings

Before using the product, read carefully the user manual first and use the product safely.

- Users may not arbitrarily disassemble or rebuild the product. This may damage the product.
- Do not disassemble the product while the power code is on. This may cause electric shock or fire.
- Do not touch the power plug with wet hands or use damaged power codes or loose outlet. This may cause electric shock or fire.
- Do not move the product while it is activated. This may damage the hard disk. Only move the product while the power code is off.
- If users drop the product or provide shock to it, the product and its hard disk can be damaged.
- Do not install the product in places with a lot of dust, direct ray of light, rain and wind, wetness or high humidity because the product can be damaged.
- Do not install the product near products releasing a lot of heat. The product can break down if it is stored or left alone at high temperature for a long time. Install the product in a well-ventilated area.

Application Warnings

Before using the product, read carefully the user manual first and use the product properly.

- Data in the hard disk can be damaged due to static electricity, awkward usage or defective products. Therefore, please pay close attention in handling the product. Always back up important data. Especially, be careful of losing the data as manufacturers have no responsibility on such damage.
- When exchanging the hard disk, fully dissipate the heat and separate the product. Be careful not to get burnt from the heat generated from the hard disk when the product is activating.
- The data in the hard disk can be damaged if it is close to magnetic materials such as speakers or magnets.
- It is possible to repair the hard disk for free if the product has defects. However, the manufacturer is not responsible for restoring or compensating for the damaged data in the hard disk.
- Pictures and titles in the user manual are prepared based on NAS-20.

Introduction

NAS-20 connects to network as a file server which uploads/downloads contents (movie, music and photograph, document etc.) from any kind of equipment which is connected in the same network.

It will be able to connect external enclosures to USB Host to make capacity bigger.

It supports all 3.5" SATA I and II HDD.

It also supports RAID 0/1/JBOD when using two hard disks (below HDD). In addition, it recognizes with each single disk and can use the disk independently.

When connecting a printer to USB port (back of NAS-20), it is possible to use as a network printer with other PCs and MACs.

(We didn't test all USB printers. So some printers maybe not be able to operate. The products which are tested in our lab will be released at our web site. (<http://www.sarotech.com>))

Main Features

- Support NAS functions.
- Equipped with one gigabit LAN port (10/100/1000M)
- Support RAID functions (RAID0, RAID1, and JBOD)
- Support two internal SATA hard disk drives
- Provide two USB ports for connecting USB mass storage devices and printer.
- Allow you to share your files via FTP or Network Neighborhood
- Provide Internet download engine which supports download through FTP, Web and BitTorrent.
- Allow you to share your music to iTunes
- Easy to use Web-based GUI for configuration and management
- Support NTFS Write function.
- Support over 2TB RAID if there is no problem in power adapter. (Max 4TB RAID)
- Support DDNS hostname.

Product package

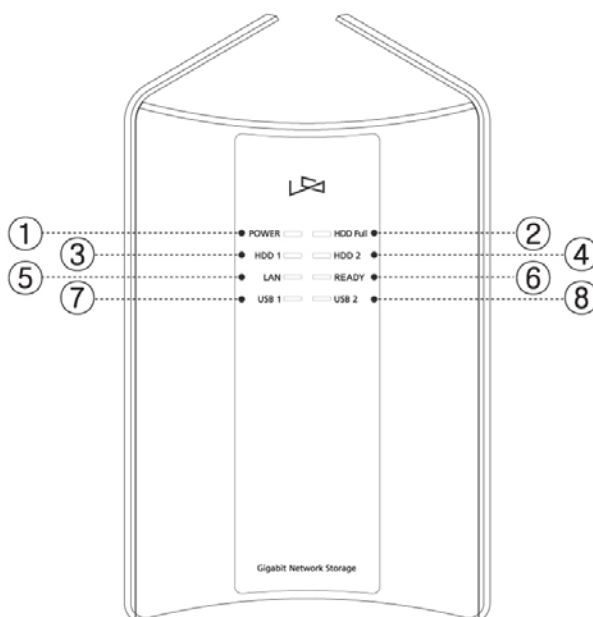
- NAS-20
- Quick Installation Manual
- Installation CD (Backup program, NAS-20 Search Program and User Guide Included)
- AC Power Adapter
- LAN Cable
- AC Power Cable

Product Specifications

Model Name	NAS-20
Standard Specification	IEEE 802.3
Port	100/1000 Mbps RJ-45(1 port), USB 2.0 Host (2 ports)
Buttons	POWER, Initialize, Reset
LED	POWER, HDD1, HDD2, USB1, USB2, HDD Full, LAN, READY
RAID Error beep	Supported
CPU	32BIT arm9 Processor(400MIPS)
Memory	128MB(DDR SDRAM)
Supported HDD	2 x 3.5" (8.9cm) SATA HDD
Supported USB Disks	NTFS/FAT32/EXT3 (NTFS Write)
RAID	0/1/JBOD, (2 HDDs supported, over 2TB RAID supported)
OS	Windows XP/Vista/7, Mac 10.3 or higher, Linux(kernel 2.6 or higher)
Supported Web Browsers	Internet Explorer 6.x or higher, Firefox 1.0 or higher, Safari 3.0 or higher
Network Protocols	TCP, UDP, IP, NetBEUI, Apple Bonjour
Network File Services	Microsoft Networks(CIFS/SMB), FTP
Network Connection	Dynamic/Static IP, DDNS supported
Firmware Upgrade	Firmware Upgrade through a web browser
Configuration Management	Web based Management
Supported Service	Samba, FTP, Printer, iTunes Server, NTP/BitTorrent Client
Time/Time Zone	Supported
Supported Language	Korean, English, Simplified Chinese, Traditional Chinese
Dimension (W x L x H)	101 x 170 x 190.5 mm
Weight	1.65Kg (without HDD)
Power	95~240 VAC, 50/60 Hz

Name and Function of Each Part

- Front Panel

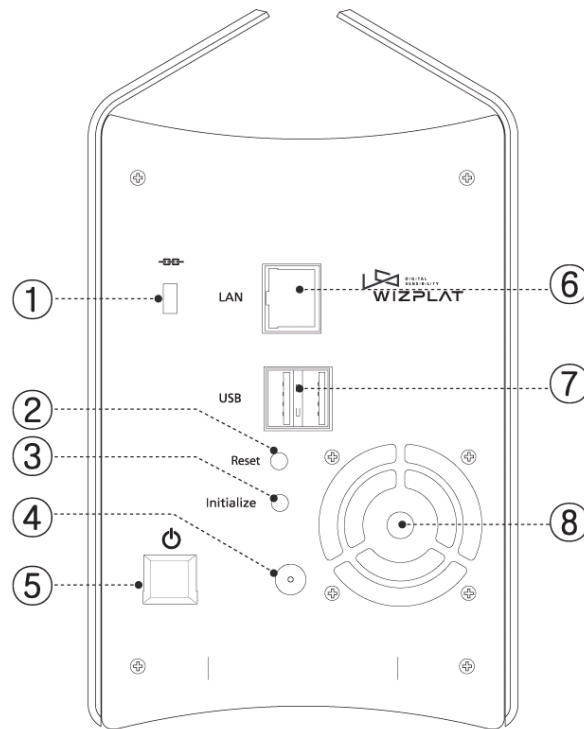


On the storage server's front panel there are LEDs, which shows the status of this storage server. Below is the list of each LED and its description.

LED	Status	Description
POWER	ON	NAS-20 is powered on
HDD Full	ON	Internal SATA hard disk drive is used over 90%.
HDD1	ON	Internal SATA hard disk drive is installed
	Off	Internal SATA hard disk drive is not installed
	Blink	Internal SATA hard disk drive fails or is not installed when the storage server is in RAID mode. There is no internal SATA hard disk drive when the storage server is not in RAID mode.
HDD2	ON	Internal SATA hard disk drive is installed
	Off	Internal SATA hard disk drive is not installed
	Blink	Internal SATA hard disk drive fails or is not installed when the storage server is in RAID mode. There is no internal SATA hard disk drive when the storage server is not in RAID mode.
LAN	ON	LAN port is connected (after NAS-20's booting is completed)
	Off	LAN port is unconnected
READY	ON	NAS-20's booting is completed
USB1	ON	USB storage device is connected to USB1 port
	Off	USB storage device is not connected to USB1 port
USB2	ON	USB storage device is connected to USB2 port
	Off	USB storage device is not connected to USB2 port

- Back Panel

The diagram below shows the storage server's back panel.



1) Kensington lock: Can be hooking up to wall or other equipment in case of stolen.

2) Reset Button: When a user connects DC power cable to NAS-20, the POWER LED will be on and off and now you can push [POWER] button to reboot.

If the POWER LED is on and NAS-20 is stopped, press [Reset] button to reboot NAS-20 manually.

3) Initialize Button: Initialize the password of "admin" to "admin". (For firmware version 2.1 or higher, the password of admin is "nas".)

4) DC Power Jack: Terminal for supplying power by connecting to DC power cable.

5) POWER Button: When the storage server is not working, pressing the Power button will switch on the power and make the storage server start.

6) Local Area Network (LAN): You should connect the LAN port of this storage server to your hubs/switches, or one LAN port of your router etc.

7) USB1, 2: The USB port 1, 2 allow you to share your files stored in the USB mass storage device plugged in. You can also connect USB printer to this port.

※ Note : Please plug the external power of your USB mass storage devices before you connect them to the storage server.

※ Note : If you have USB mass storage device (like USB external HDD), please plug it to this storage server's USB 1, 2 port, and plug the USB flash disk you wish to share files among different PCs and notebooks to the USB 1 port.

8) FAN: Cooling FAN

*RAID Error buzzer: Fixed on the product.

If HDDs are unrecognized or broken for RAID configuration, RAID Error buzzer will beep periodically.

You can turn off beep in [Control Panel]->[System]->[Fan/Buzzer Control].

When NAS-20 has a RAID problem, the beep comes out again even if NAS-20 is rebooted.

NAS-20 begins the rebuilding process in RAID 1 when two HDDs are different.

If RAID1 rebuilding is completed, error beep will turn off automatically.

1. Users and Groups

1.1 User

In User Management menu, it shows all existing users in the system. A new user is created by filling out the form and click [Save] button. To delete a specified user, you need to select the existing user and click [Delete User] button. Click [Group] button to enter the Group management menu. (It supports 60 users but it can be changed.)

※ **Note** : To create a new user set the cursor to [===== New User =====].

Parameters	Description
User Name	The name of this user.
Password	The password of this user.
Confirm password	Re-type the password of this user for confirmation.
Description	The description of this user.
Enable Quota	Set the selected user's quota
Save	Click [Save] to save the information of new user to add a new user for File/FTP server.
Clear Form	You can click [Clear Form] to reset selection in Users list.
Groups	Move to the Group menu
Delete User	You can click [Delete User] to delete the selected user in Users list.

1.2 Group

In Group Management menu, it shows all existing groups in the system. A new group is created by filling out the form and click [Save] button. Select the existing group name and click [Delete Group] button to delete a specified group. Add or Remove users from an existing group can be done by highlighting the group name and click [Members] button.

※ **Note** : To Create a new group, set the cursor to [===== New Group =====].

Parameters	Description
Group Name	The name of this group.
Save	Click [Save] to save the information of new Group to add a new group for File/FTP server.
Members	You can click [Members] to modify the users in the selected group.
Delete Group	You can click [Delete Group] to delete the selected group in Groups list.
Clear Form	You can click [Clear Form] to reset selection in Groups list.

2. LAN Settings

The LAN Settings menu includes the IP address and DNS settings and Hostname.

We recommend using both [Obtain IP address automatically] and [Obtain DNS Server address automatically].

Parameters	Description
Host name	You must assign a unique name for each NAS-20 as the identification within your local area network. Default value is "nas20".
Obtain IP address automatically	DHCP server is used to manage the IP address of a network. If you have a live DHCP server in your network and wish this storage server get IP address from your DHCP server, please select [Obtain IP address automatically]. ※Note : According to the settings of your DHCP server, the IP address obtained from your DHCP server may change by time.
Use following IP address	If you want to manually assign an IP address to this storage server, please select [Use following IP address] and assign IP Address, Subnet Mask and Gateway Addresses to the storage server here.
IP Address	The IP address used by this storage server in your network.
Subnet Mask	The IP Subnet Mask of your LAN segment.
Default Gateway	The gateway IP address of your network. Normally, it is the LAN IP address of the router you are using to access the Internet.
Obtain DNS Server address automatically	If you want to use get DNS Server address from your DHCP server, please select [Obtain DNS Server address automatically].
Use following DNS Server address	If you want to manually assign an DNS Server address to this storage server, please select [Use following DNS Server address] and assign IP Address, Subnet Mask and Gateway Address to the storage server here.
Primary DNS address	Fill in the IP address of a live DNS server.
Secondary/Others DNS Address (optional)	This is optional. You can enter another DNS server's IP address as a backup. The secondary/ Others DNS will be used when the above DNS server fails.
MAC Address	The MAC address of this storage server.
Save	Save the configurations.

3. File (Samba) Server and shared folder

3.1 File Server Basic Setting

This storage server supports CIFS (Samba) protocol which lets you share files stored in all attached storage devices via network neighborhood. You can assign the file server name, shared folders and folder sharing policies.

Parameters	Description
Character Set	You can select a language (or encoding) used by both the FTP clients and Samba Server.
Enable	You can select enable/disable the file server function
Workgroup	The My Network Places group this file server will join.
Description	A brief description of this file server. This string will be shown at the detailed information field of My Network Places.
Save	Save the configurations.

3.2 Add/Delete the shared folders

Share Management menu shows all existing shared names. The shared folder public was the factory default shared name. In addition, you can add/delete the shared folders in this menu.

To Create a new shared folder, set the cursor to [===== New Share Folder =====].

Parameters	Description
Share Name	The name for shared folder that shows in My Network Places on client computer.
Save	Save the configurations.
Windows, FTP Access	Click [Windows, FTP Access] to modify the selected shared folder for file server.
NFS Access	Click [NFS Access] to modify the selected shared folder for file server.
Delete Share	You can click [Delete Share] to delete the selected shared folders in shared folders list.
Clear Form	You can click [Clear Form] to reset selection in shared folders list.

3.3 Modify the shared folders (Windows, FTP Access)

You can change the user permission to the shared folder.

Allow for all is to allow all users to access the shared storage in the server; or you may specify User/Group name in Access box and select Read Only or Writable permission to the User/Group.

Parameters	Description
Allow for all	Everyone can access to selected shared folder and download some files and folders in it. In addition, everyone can upload some files and folders to NAS-20.
Read Only	Users can access the selected shared folder and download some files and folders in NAS-20.
Writable	Users can access the selected shared folder and download some files and folders in it. And the user can also upload some files and folders to NAS-20.
Remove	The selected users can be removed in the allowed list.
Save	Save the configurations.
Cancel	Go to the previous menu.

3.4 Modify the shared folders (NFS Access)

You could check Allow for all to allow all clients access NFS server. Or add client PCs IP address/Subnet mask to the permission list to allow only permission list to access the NFS server.

The screenshot shows the 'NFS Access - sara_public' configuration window. On the left is a sidebar menu with categories: 'Users and Groups' (containing 'User Management' and 'Group Management'), 'File and Print' (containing 'File Server', 'Share Management', and 'Printer Server'), 'System' (containing 'Network Service', 'Maintenance', and 'Log File'), and 'Log File'. The main area has a title bar with 'Basic', 'Control Panel', 'Personal Information', and 'Log out'. Below the title, the title 'NFS Access - sara_public' is displayed. The main content area includes a text box labeled 'Allowable IP/Subnet' containing '==== END LIST ===='. To the right of this box are 'Add' and 'Remove' buttons. Further right are radio buttons for 'IP Address' (selected) and 'Subnet', each followed by a 4-digit input field. Below these is a checkbox labeled 'Allow for all (Grant access to all)'. At the bottom right are 'Save' and 'Cancel' buttons.

Parameters	Description
Allow for all	All PCs can access the selected shared folder.
Allowed IP/Subnet	The allowed PCs in the Allowed IP/Subnet lists can access the selected shared folder.
Add	Add IP Address or Subnet Information in the right side to the Allowed IP/Subnet lists.
Remove	The selected IP Address or Subnet information in the Allowed IP/Subnet lists can be removed in the allowed list.
Save	Save the configurations.
Cancel	Go to the previous menu.

4. FTP Server

This storage server supports FTP protocol which lets you share files stored in all attached storage devices to not only your network but also Internet (it you have Internet access and your router has correct port forwarding settings).

	Basic	Control Panel	Personal Information	Log out
+ Users and Groups User Management Group Management + File and Print File Server Share Management Printer Server + System Network Service Maintenance Log File	File Server Setting Character set English (CP437) Windows Setting Enable ☒ Workgroup WORKGROUP Description sara2 WINS Server (Optional) FTP Server Setting Enable ☒ Enable FTP with TLS ☐ Port Number 21 NFS Server Setting Enable ☒ Guest Access Setting Enable ☐ Enable Quota ☐ Guest-user Quota MB Save			

Parameters	Description
Enable	Click [Enable] box to enable FTP server function
Port Number	You can change the port number of the FTP server during (1~65535). Default port is 21.
Save	Save the configurations.

5. BitTorrent

This storage server supports BT (stands for BitTorrent) peer-to-peer file download function. You can let this storage server download files via BitTorrent protocol, without switching your computer on. You can also see all downloading BT items here. Please make sure that this storage server has enough remaining storage space.

Notice: You have to download the torrent file in your PC already.

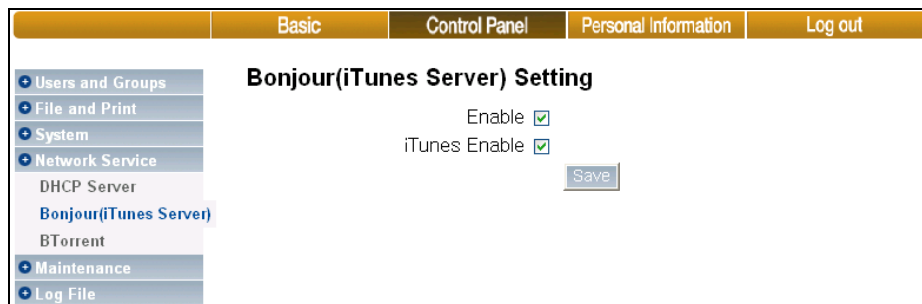
Parameters	Description
Browse	Select the new torrent (files with .torrent extension) file in your PC.
Add	Click this button to add a new torrent (files with .torrent extension) file, so you can start BitTorrent download. You'll be prompted to provide the location of .torrent file
Start	Click this button to start the download job.
Stop	Click this button to stop the download job.
Delete	Click this button to delete job.
Refresh	Click this button to refresh BitTorrent job status

6. iTunes Server

iTunes is a popular and powerful multimedia player, and supports streaming media. If you have media files supported by iTunes, you can share these file by iTunes server and let other computers or iTunes-compatible media players play these media files online.

※ **Note** : You can enable or disable iTunes Server here. After checking at the Bonjour Enable and iTunes Enable, click [Save] to save the configurations.

※ **Note** : All of MP3 music files should be put in /public/music folder through samba or ftp protocol, then client pc can search NAS-20 and play music within iTunes tool. The iTunes tool can be downloading from Apple website.



※ **Note** : You can enable or disable iTunes Server here. After checking at the Bonjour Enable and iTunes Enable, click [Save] to save the configurations.

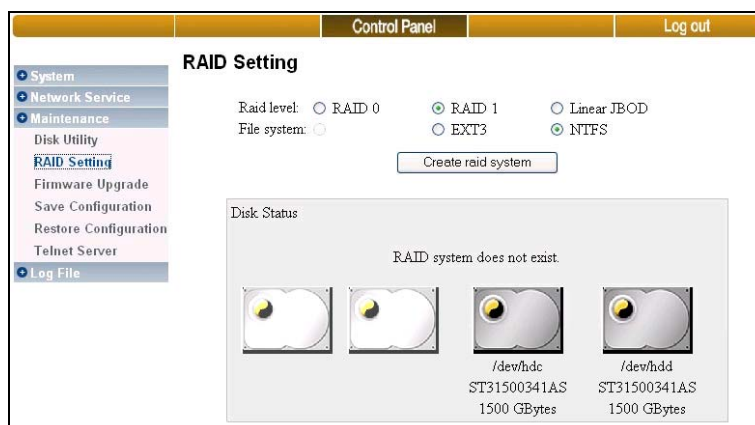
※ **Note** : All of MP3 music files should be put in /public/music folder through samba or ftp protocol, then client pc can search NAS-20 and play music within iTunes tool. The iTunes tool can be downloading from Apple website.

7. RAID Setting and Disk Utility

7.1 RAID Setting

You can use the Storage Tools to manage the partition and format of the attached storage devices. It also allows you to build linear JBOD, RAID 0 or RAID1 if you have two internal SATA hard disk drives installed. The storage server only can build RAID on the two internal SATA hard disk drives.

We recommend using RAID 1 as Raid Level and NTFS as File system.



※ Note : If you want to build RAID for the storage server, it is strongly suggested that the two internal SATA hard disk drives are the same brand and model.

Parameters	Description
RAID Level	You can select to let the storage server build Linear JBOD, RAID 0 or RAID 1 on the two internal SATA hard disk drives. We recommend the RAID 1.
File System	We recommend the NTFS partition.
Create raid system	Click to [Create raid system] button to create raid system.

※ Note : Raid level

Linear JBOD makes the disks appear to be a single one by combining the drives into one larger logical one. JBOD doesn't deliver any advantages over using separate disks independently and doesn't provide any of the fault tolerance or performance benefits of RAID.

RAID 0 helps you to merge two hard disk drives together in striped way. It simulates a big hard disk drive and the available space of the virtual big hard disk drive is the sum of the two physical internal SATA hard disk drives. RAID 0 only works when both internal SATA hard disk drives are healthy. If any one of the two internal SATA hard disk drives fails in RAID 0 mode, you will lose whole data and it is unrecoverable.

※ Warning : For RAID–NTFS configuration, the HDD's data cannot be read directly in windows PC because the partition of HDD has RAID features.

RAID 1 maintains two copies of your data in the two internal SATA hard disk drives. Each disk drive keeps one copy. So RAID 1 still works correctly if just only one of the two internal SATA hard disk drives fails. Because RAID 1 keeps two copies of whole data, the disk space utilization is only 1/2. RAID 1 simulates a stable hard disk drive and the available space of the virtual stable hard disk drive is the size of the smaller physical internal SATA hard disk drive if the sizes of the two internal SATA hard disk drives are different (The additional space of the larger hard disk drive is useless).

7.2 Disk Utility

This Page shows the status of all attached storage devices.

Disk utility shows device name, type of file system, total disk size, used disk size, volume mounted, and disk mount status of all disks. For new attached hard disk, you should format the HDD before any setting.

BasicControl PanelPersonal InformationLog out

Users and Groups

File and Print

System

Network Service

Maintenance

Disk Utility

RAID Setting

Firmware Upgrade

Save Configuration

Restore Configuration

Telnet Server

Log File

Disk Utility

Device Name	Type	Mount Point	Status	Format Type/Format	Scandisk	Umount	Health
/dev/sda	fat32	/mnt/usb1	mounted	ext3FormatScanUmountNoneDetail			
/dev/hdc	none		unmount	ntfsFormatScanUmountPASSEDDetail			
/dev/hdd	none		raid used	ext3FormatScanUmountPASSEDDetail			
Refresh							

Parameters	Description
Device Name	The name of a storage device. /dev/s** stands for external storage device and /dev/h** stands for an installed HDD.
Type	It shows the file partition of storage device. You can select FAT32, NTFS or EXT3 format. We recommend using "NTFS".
Status	It shows whether the storage devices are mounted. The device should be mounted to use it.
Format Button	This is used to format the specified disk. NAS-20 supports three types of file system: NTFS, EXT3, and FAT32. We recommend using "NTFS". The format may take several minutes to finish, depends on the size of the partition.
Scan Button	This is used to check the disk integrity
Detail Button	If the hard disk supports S.M.A.R.T, it will report the disk health status.

7.3 Disk Usage

This menu collects and displays all HDDs usage summary and user's quota information.

Basic

Control Panel

Personal Information

Log out

Users and Groups

File and Print

System

LAN Settings

Time Settings

Turn Off & Restart Server

Information

Disk Usage

Error Notification

Fan/Buzzer Control

Network Service

Maintenance

Log File

Disk Usage

Last Checked: 4/6/2009 18:42:53

Please select statistics information: Summary

Disk Name	Capacity	Used	Free	Disk Usage (%)
/dev/md	465 GB	154 GB	310 GB	33.12%

Refresh

Basic

Control Panel

Personal Information

Log out

Users and Groups

File and Print

System

LAN Settings

Time Settings

Turn Off & Restart Server

Information

Disk Usage

Error Notification

Fan/Buzzer Control

Network Service

Maintenance

Log File

Disk Usage

Last Checked: 1/1/1970 09:00:00

Please select statistics information: User

User Name	Quota	Used	Free	Disk Usage (%)
admin	unlimited	3MB	--	--
guest-share	unlimited	0MB	--	--
okman	unlimited	0MB	--	--

Refresh

8. How to use Backup Program (IntelliStor)

※ **Caution** : IntelliStor does not support Windows 2000/2003 Server.

※ **Note** : You already have to map the shared folder of NAS-20 a network drive in your PC.

8.1 IntelliStor LT Quick Start Guide

1. IntelliStor LT Installation

- 1) Simply place the IntelliStor(Eng) CD in your CD-ROM drive and run IntelliStor (ENG)\IntelliStorLTSetup(ENG).exe
- 2) All installation processes are completed, restart the system.
- 3) Run IntelliStor icon on Windows Desktop.

2. Backup location Setting

To assign the location of backup data, click 'next' after assigning backup location on the backup location setting wizard. Not only backup device on network, but also local HDD or DVD-ROM selections are available. If the backup device is a portable disk, please check "External HDD" option.



3. Backup Option Setting

Check the backup option to be used backup.

User can choose options File Compression/Encryption, File Versioning, Automatically close protect window after job completion, Protect Window Minimize When Backup, Shutdown system on completion and so on.



4. Backup file filter Setting

Type of backup file can be chosen at the backup wizard. If you click 'Next' without any choice, all types will be saved as backup file.



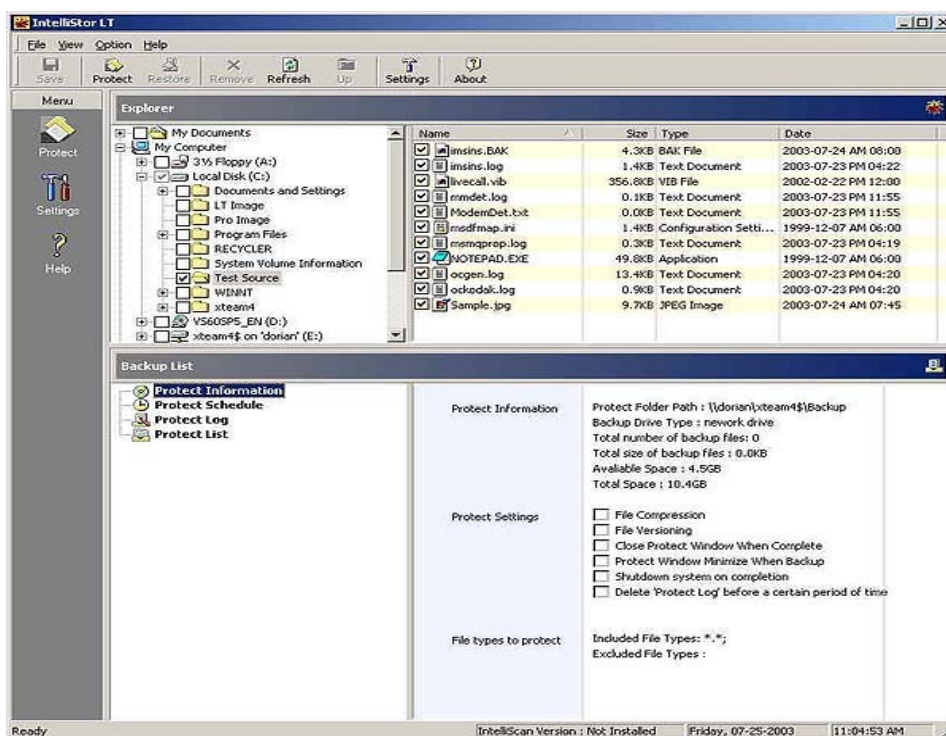
5. Scheduling Setting

Schedule can be set in this step. Backup performs automatically according to the set time. For setting schedule, click 'add' and setting the schedule. Click 'Finish' and the schedule window will be disappeared.



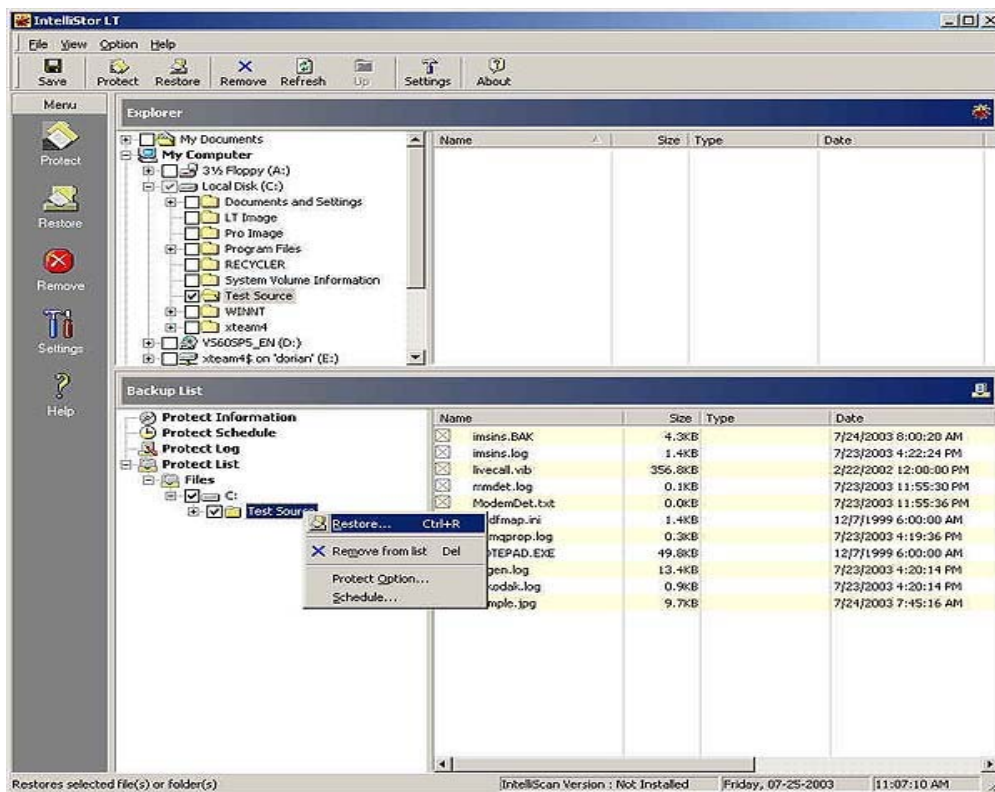
6. Backup Operation

Select backup source by checking small box of folder or file and click 'Save' at icon bar. To start backup, click the 'Protect' at icon bar.



7. Restore Operation

Open 'backup list' and select data by clicking right button of mouse. You can select 'Restore' at the pop-up menu or select 'Command' -> 'Restore' at menu bar. Otherwise, click 'Restore' at the Icon bar or left menu of the window. Restore Location can be set in the Restore wizard.



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9. Printer Server

NAS-20 can be used as a printer server if you plug an usb printer to USB port.

If printer connects to NAS-20 successfully, you will see the connected printer name as picture below.

※ **Note** : Check Printer Server "Enable" box to enable Print Server functions.

	Basic	Control Panel	Personal Information	Log out
- Users and Groups - File and Print - File Server - Share Management Printer Server - System - Network Service	Printer Server Setting Enable ☒ Printer Name usblp0 Description SINDORICOH SINDORICOH LP 1800 (optional) Save			

10. Misc Functions.

10.1 Firmware Upgrade

This menu allows you to upgrade the storage server's system firmware. To upgrade the firmware of your storage server, you need to download the firmware file to your local hard disk, click the [Browse] button to locate the firmware file on your PC.

After you selected the new firmware file, click [Start Upgrade] at the bottom of the screen to start the upgrade process. (You may have to wait a few minutes for the upgrade to complete). Once the upgrade is complete you can start using the storage server.

※ **Caution** : When upgrading firmware, be sure not to switch the computer off, or restart your computer, or break the network connection of your computer.

※ **Note** : The new firmware file can be found in our web site. (<http://www.sarotech.com>)

	Basic	Control Panel	Personal Information	Log out
- Users and Groups - File and Print - System - Network Service Maintenance - Disk Utility - RAID Setting Firmware Upgrade - Save Configuration - Restore Configuration - Telnet Server - Log File	Firmware Upgrade Current Firmware Version 1.07S Upgrade File C:\NAS-20\NAS20_R2.0B.Tar.gz Browse... Upgrade			

10.2 Time and Time Zone

This menu set current Date, Time and Time zone.

And you can specify NTP server if you want to get Date and Time from time server.

Parameter	Description
Date and Time	If your network is not connected to the Internet, the storage server will have no chance to get correct time from the time server. In this case, you can manually assign current time here.
Time Zone	Select the time zone of the country you are living. The storage server will set its time based on your selection.
NTP Server	You can select a time server among the NTP Server list.
Save	Save the configurations.
Update Time	Get the latest time information from NTP Server.

10.3 Change admin and user password

Account is the only section in [Personal Information] tab. You could change the password of user "admin" and the language shown in the menu. Besides, share list, system disk quota and the percentage of disk used is shown as well. By default, the admin's password is "admin." (For firmware version 2.1 or higher, the password of admin is "nas".) And you can also change the user's password after the user log on.

Parameters	Description
Change Password	Enter your new password twice for verification purposes
Language Preference	Change the menu language.
Description	The description of this user.
Disk Usage	The disk usage used by the logon user.
Save	Save the configurations.
Refresh	Refresh the information.

※Note : If you forget your admin password, you have to reset the storage server to the factory default (password is "admin") with the [Initialize] button (see storage server's Rear panel) (For firmware version 2.1 or higher, the password of admin is "nas".)

10.4 Information

This page displays basic information of the storage server; you should see the screen below.

	Basic	Control Panel	Personal Information	Log out
- Users and Groups - File and Print - System - LAN Settings - Time Settings - Turn Off & Restart Server - Information - Disk Usage - Error Notification - Fan/Buzzer Control - Network Service - Maintenance - Log File	System Information Product Name NAS-20 Firmware Version 1.07S Product Vendor Sarotech Co., Ltd. IP Address 192.168.123.78 MAC address 00:0F:D6:00:13:25			

Parameter	Description
Firmware Version	The version of storage server firmware.
IP Address	The IP address used by this storage server in your network.

10.5 Fan and Buzzer Control

If you want to turn on or off the FAN, press [ON]/[OFF] button next to "Fan Control" and click [Save].

If NAS-20 has a RAID problem, the buzzer makes sounds. If the beep sound is noisy, press [OFF] button next to "RAID Error Buzzer" and click [Save].

	Basic	Control Panel	Personal Information	Log out
- Users and Groups - File and Print - System - LAN Settings - Time Settings - Turn Off & Restart Server - Information - Disk Usage - Error Notification - Fan/Buzzer Control - Network Service - Maintenance - Log File	Fan/RAID Error Buzzer Control Fan Control OFF Save RAID Error Buzzer OFF Save RAID Error Buzzer works when NAS-20 has the buzzer. And it makes sound if NAS-20 has a raid problem.			

10.6 Restart and Turn off

You can restart the storage server's system when there's something wrong with the storage server. Clicking [Restart] button will reboot your storage server.

You can also turn off the storage server's system by clicking [Turn off] button.

Parameters	Description
Restart	It will restart the storage server.
Turn off	It will turn off the storage server.

11. Register NAS's DDNS Hostname

To access NAS through internet, we recommend you to register DDNS. Go to [Control Panel->System->DDNS] menu with admin account.

11.1. Register DDNS Host name.

After input your DDNS host name(ex: ok), select [Register/Modify] button. If it succeeds, the DDNS hostname will be "ok.u-stor.net". If you install webhard S/W, the webhard will be <http://ok.u-stor.net:8000>. (Because it uses port number 8000.) If NAS is connected to internet without an IP share/router, the setting is completed. For webhard explorer, you input the DDNS hostname(ex: ok.u-stor.net) and port number(default port: 9000).

If you want to change your DDNS hostname, input your new DDNS host name(ex: test) and select [Register/Modify] button. If it succeeds, the DDNS hostname will be "test.u-stor.net".

DDNS Configuration
If you register DDNS Hostname, you can access your NAS with DDNS hostname easily in the internet. It works well in 20 minutes after registering DDNS host.

DDNS Service Used

Current DDNS Host Name

New DDNS Host Name .u-stor.net

Webhard's address in the internet

DDNS Configuration
If you register DDNS Hostname, you can access your NAS with DDNS hostname easily in the internet. It works well in 20 minutes after registering DDNS host.

DDNS Service Used

Current DDNS Host Name

New DDNS Host Name .u-stor.net

Webhard's address in the internet <http://ok.u-stor.net:8000>

※ Caution

- 1) If there is NAS under an IP share/router, you have to do port forwarding in the IP share's management program. Refer the IP share's manual in detail.
- 2) Even though your IP share's setting is normal, some ISP companies protect some ports (ex: 8000). Then you have to change the server's port between 1025 and 65535. Or ask your ISP companies for that problem.
- 3) There are some dedicated DDNS hostnames. You cannot use dedicated DDNS hostnames. And you cannot use already registered DDNS hostnames.

11.2. Delete DDNS host name.

If you want to delete your DDNS host name, select [Delete] button by the Current DDNS Host Name. If you delete your DDNS host name, you have to access your NAS by using the IP address of the NAS.

DDNS Configuration
If you register DDNS Hostname, you can access your NAS with DDNS hostname easily in the internet. It works well in 20 minutes after registering DDNS host.

DDNS Service Used

Current DDNS Host Name

New DDNS Host Name .u-stor.net

Webhard's address in the internet <http://ok.u-stor.net:8000>

DDNS Configuration
If you register DDNS Hostname, you can access your NAS with DDNS hostname easily in the internet. It works well in 20 minutes after registering DDNS host.

DDNS Service Used

Current DDNS Host Name

New DDNS Host Name .u-stor.net

Webhard's address in the internet

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